AVERAGE AND PROBABILITY.

67. Proposed by HENRY HEATON, M. Sc., Atlantic, Ia.

A witness in court who undertook to recognize the signature of an individual failed four times in succession. What is the probability that he was correct the fifth time? An actual occurrence.

68. Proposed by J. K. ELLWOOD, A. M., Principal of Colfax School, Pittsburg, Pa.

What are the odds against throwing 7 or 11 at one throw with two dice ?

*** Solutions of these problems should be sent to B. F. Finkel, not later than Sept. 10.

MISCELLANEOUS.

64. Proposed by G. B. M. ZERR, A. M., Ph. D., President and Professor of Mathematics, The Russell College, Lebanon, Va.

Find the caustic by reflection of an hyperbola, the bright point being the center.

65. Proposed by J. M. COLAW, A. M., Monterey, Va.

Three circles, radii in ratio 1, 3, 5, are tangent externally and enclose one acre; what are the radii ?

*** Solutions of these problems should be sent to J. M. Colaw, not later than Sept. 10.

EDITORIALS.

Professor Fellows has been elected Professor of Mathematics in the University of Missouri.

Dr. George Bruce Halsted is spending the summer in Japan, his visit to that country being in the interest of mathematics.

Dr. Alexander Ziwet, of the University of Michigan, has been granted one years leave of absence. Dr. Ziwet expects to spend the time abroad.

Dr. G. A. Miller, of Cornell University, gave a course on Permutation Groups during the first term of the summer quarter, at the University of Chicago.

Prof. John B. Faught, of the Indiana University, has been assigned a $600 Fellowship at the University of Pennsylvania, where he expects to go the coming year to do graduate work.

Prof. T. U. Palmer, of the University of Alabama, and Professor Drope, of the University of Arkansas, are doing advanced work in mathematics at the University of Chicago, during the summer quarter.

Prof. G. B. M. Zerr has been elected Principal of the East Chester High School. Professor Zerr will now be located only a few miles from the University of Pennsylvania, to whose mathematical library he will have access, and of which he will make good use.

BOOKS AND PERIODICALS.

Elements of Trigonometry with Tables. By Herbert C. Whitaker, Ph. D. (University of Pennsylvania), Central Manual Training School, Philadelphia, Penn. 8vo Cloth, xvi + 182 pages. Price, $1.00. Philadelphia : D. Anson Partridge.

Among the many noteworthy features of this book are: The concise and accurate statement of definitions; a table of Circular Measure, i. e., where degrees and minutes are reduced to radians; clear presentation of fundamental conventions; a brief but comprehensive discussion of the Theory of Logarithms; and an excellent introduction to the study of Complex Quantities and Hyperbolic Functions. The discussion of the Theory of Logarithms and the setting forth of the method by which Napier invented his system will be of great value to all students of Trigonometry and Algebra. The work, in every way, is worthy of the highest patronage by teachers who are contemplating a change of text-books on this subject. B. F. F.

Prismoidal Formulæ and Earthwork. By Thomas U. Taylor, C. E. (University of Virginia), M. C. E. (Cornell University), Associate Member of the American Society of Civil Engineers ; Member of the American Mathematical Society ; Professor of Applied Mathematics, University of Texas. First edition, first thousand. 8vo Cloth, x + 102 pages. Price, $1.50. New York : John Wiley & Sons.

The object of this admirable treatise on *Prismoidal Formulæ and Earthwork* is to present a ready method of estimating the usual quantities in earthwork computations by graphical methods. The method outlined by the author applies to the majority of earthwork calculations, whether the volume be calculated by the Newtonian or average end-area formula. In this respect the work will be of great value to the civil engineer. The author, in writing the book, has also discovered the original authors of the usual formalæ associated with the prismatoid and ascribes the honor to Newton, Hirsch, Koppe and Kinklin as can be verified by history. The introduction to the work is of great historic interest and value. B, F. F.

Lectures on the Geometry of Position. By Theodore Reye, Professor of Mathematics in the University of Strassburg. Translated and Edited by Thom-F. Holgate, M. A., Ph. D., Professor of Applied Mathematics in Northwestern University. Part I. 8vo Cloth, xix + 248 pages. Price, $2.25, *net.* New York : The Macmillan Co.

It is believed that Professor Reye's work, *Geometrie der Lage,* is the best in any language. In translating the first part of this incomparable work into English, the translator has placed within easy reach of the English-speaking student the most refined discus-